UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,443	02/11/2004	Michael J. Miller	4489 P	3696

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EXAMINER
JAIN, RAJ K

ART UNIT	PAPER NUMBER
2664	

DATE MAILED: 05/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/776,443	MILLER ET AL.
	Examiner	Art Unit	
	Raj K. Jain	2664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>11 February 2004</u>.

2a)☐ This action is **FINAL**.　　2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-69</u> is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) <u>11-20 and 31-69</u> is/are allowed.

6)☒ Claim(s) <u>1-8 and 21-28</u> is/are rejected.

7)☒ Claim(s) <u>9,10,29,30</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>2/11/04</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All　b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>2/11/04</u>.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1. Claims **1-69** examined on the merits.

Claim Objections

Claims 37-45 and 46-54 are objected to because of the following informalities:

Claims 46-54 are identical to claims 37-45. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-8, and 21-28 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Kelly et al. (US 20040008726A1) in view of Balakrishnan et al (US

20040090974A1).

Regarding claims 1, 5, 21, and 25 Kelly discloses a method for bandwidth

allocation on a network (see Fig 1) comprising:

- building an active channel dynamically from one or more time slots on a time

division multiplexed network (see paras 007, 0032, 0033, 0040, 0041, each network

element places a request/allocation for bandwidth to the network NOCC 207 (see Figs 2

and 3), which than assigns a minimum bandwidth to the element, and than the system

prepares for loading or building prior to transmission; and

-resizing said active channel dynamically based on one of the items selected
from the group consisting of a minimum bandwidth value, and a maximum bandwidth
value (see paras 0073-0079, Kelly discloses minimum and maximum bandwidth
allocations based on number of users and how the system is able to automatically
configure and size the channel without the need for "resizing". Applicants invention
provides for "resizing" based on values of bandwidth requirements, one skilled in the art
can appreciate having a value associated with actual bandwidth requirements based on
number of users can easily be adopted and therefore added. Thus Kelly's invention is
analogous in nature and function to applicant's desired invention, since the resizing is in
Kelly's invention is avoided by "automatically" adjusting based on number of users on
the system, and therefore one can interpret that resizing is possible if so desired or
needed using specific bandwidth associated values as appropriate.)

Kelly however specifically fails to disclose the use of priority values for bandwidth
allocation.

Balakrishnan discloses the use of priority values for bandwidth allocation (see
abstract, Fig. 15 and para's 0175-0177, priority values are set from highest priority to
lowest priority for the various queues and than dynamic bandwidth can be assigned
based on the priority value of a particular queue in interest.). Bandwidth allocation
based on priority values provides for a customized service plan for each group, person,
queue etc., as appropriate based on criteria's established by the service provider, and
therefore allowing for an efficient bandwidth usage with minimum cost.

Therefore it would have been obvious to one of ordinary skill in the art at the time

the invention was made incorporate a priority value added scheme of Balakrishnan

within Kelly thereby providing for a customized service plan for each group, person,

queue etc., as appropriate based on criteria's established by the service provider.

Regarding claims 2 and 22, Balakrishnan discloses the use of virtual output

queuing which is same as virtual channel creation (see para 0141), a virtual output

queue can only be created when a similar virtual channel is formed from one output

queue to the next receiving input queue. Virtual channel formation allows for efficient

bandwidth allocation with reduced time delay and queuing.

Therefore it would have been obvious to one of ordinary skill in the art at the time

the invention was made incorporate virtual queuing and virtual channel formation within

Kelly so as to allows for efficient bandwidth allocation with reduced time delay and

queuing.

Regarding claims 3 and 23, Kelly discloses building of active channel on a single

network (see Fig. 1, which consists of a single WAN network).

Regarding claims 4, 6, 8, 24, 26, and 28 Kelly discloses building of active

network with TDMA frames (see para 0040, one skilled in the art of TDMA

transmissions will appreciate that one TDMA frame consists of 16 time slots of equal

size and are transmitted and created contiguously.).

Regarding claims 7 and 27, the concept of channel encryption to prevent security

breach of transmitted data is well known in the arts and therefore examiner takes official

notice and thus one skilled in the art would readily could incorporated encryption programs within Kelly for protection of vital data and security of personal and other information deemed important.

Claim Objections

Claims 9, 10, 29 and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Allowable Subject Matter

The following is an examiner's statement of reasons for allowance:

Claims 11-20, 31-69 are allowed.

Regarding claim 11, the prior art discloses a dynamic bandwidth allocation system comprising of building an active channel from one or more timeslots in a time division multiplexed network.

The prior art however fails to disclose or fairly suggest deleting an active channel dynamically based on one of the items selected from the group consisting of a minimum bandwidth value, a maximum bandwidth value, and a bandwidth priority value.

Regarding claim 31, the prior art discloses a dynamic bandwidth allocation system comprising of building an active channel from one or more timeslots in a time division multiplexed network.

The prior art however fails to disclose or fairly suggest removing an active

channel when one or more network nodes fail to respond to query packets.

Regarding claims, 37, 46, 55 and 64, the prior art discloses a dynamic bandwidth

allocation system comprising of a master control node that controls the bandwidth

allocation of time division multiplexed network.

The prior art however fails to disclose or fairly suggest time slots grouped

together to form one or more active channels by the master control node.

Any comments considered necessary by applicant must be submitted no later

than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on

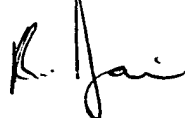Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Raj Jain whose telephone number is 571-272-3145.

The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Wellington Chin can be reached on 571-272-3134. The fax phone numbers

for the organization where this application or proceeding is assigned are (703) 872-9306

for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is 571-272-

2600.

RJ

May 23, 2005